

Notice of Allowability

Application No.

10/675,621

Applicant(s)

CHU ET AL.

Examiner

Emerson C. Puente

Art Unit

2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/23/07.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Examiner's Amendment/Comment

Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Examiner's Amendment/Comment".

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 C.F.R. 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the Issue Fee.

Authorization for this Examiner's Amendment was given in a telephone interview with James Boice (Reg No. 44,545) on April 25, 2007.

In regards to claims 12-14, please change "computer readable tangible medium" to "computer readable storage medium" (see line 3 of claim 12 and line 1 of claims 13 and 14).

Examiner's Statement of Reason for Allowance

Claims 1-14 are allowable over the prior art of records.

The following is an Examiner's statement of reasons for the indication of allowable subject matter: Claims 1-14 are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior arts.

The primary reason for allowance for claim 1 is the inclusion of a local node, the local node comprising at least one local sub-node, the at least one local sub-node including a first local sub-node, the first local sub-node comprising: a local dynamic memory, the local dynamic memory being a volatile system memory used by a processor in the first local sub-node; a

Art Unit: 2113

scalability port including a write-through transmit buffer associated with the local dynamic memory; and a first scalability chipset comprising a first memory controller that directs a write of data to the local dynamic memory simultaneous with a back-up write of the data to the write-through transmitting buffer; a remote node, the remote node comprising at least one remote sub-node, the at least one remote sub-node including a first remote sub-node, the first remote sub-node comprising: a back-up memory for the local dynamic memory of the first local sub-node, the back-up memory being distinct from local system memory of the first remote sub-node; a receiving interface buffer for receiving, from the write-through transmit buffer associated with the local dynamic memory of the first sub-node, data written to the local dynamic memory of the first sub-node; and a second scalability chipset comprising a second memory controller that directs a write to the back-up memory of data received at the receiving interface buffer; and an input/output controller in the second scalability chipset that assigns a location identity of the first local sub-node to a replacement sub-node only if the first local sub-node is removed from the multi-node computer system, the location memory based on a memory map included in the data stored in the back-up memory in the first remote sub-node in conjunction with the rest of the limitation set forth in the claim.

US Patent Application 2004/00172508 discloses having backup for a volatile system memory, but fails to disclose other specifics disclosed in claim 1.

US Patent 6,505,305 also discloses having backup for a volatile system memory, but fails to disclose other specifics disclosed in claim 1.

The primary reason for allowance for claim 6,9, and 12 is the inclusion of polling other nodes in the multi-node computer to determine if the SMI affects an operation of any of the other

Art Unit: 2113

nodes, quiescenting any other SMI affected node and transferring all of the contents of any affected node's system memory to a backup memory in an unaffected node in the multi-node computer, wherein the unaffected node assumes all operations of the node that received the SMI, thus allowing the node to be removed from the multi-node computer in conjunction with the rest of the limitation set forth in the claim.

US Patent Application 2005/0243713 discloses notifying the occurrence of a failure to a node affected by the failure, but fails to disclose other specifics disclosed in claim 6,9, and 12.

US Patent Application 2002/0010875 discloses receiving a system management interrupt in a node, but fails to disclose other specifics disclosed in claim 6,9, and 12.

The remaining claims, not specifically mentioned, are allowed because they are dependent upon one of the claim mentioned above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emerson C Puente whose telephone number is (703) 305-8012. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W Beausoliel can be reached on (703) 305-9713. The fax phone number for

Art Unit: 2113

the organization where this application or proceeding is assigned is (703) 872-9306. The examiner will be moving in October 2004. The examiner number at the new site is (571) 272-3652. The examiner can normally be reached on 8-5 M-F.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5631.

ecp

5/1/07

Robert H. Beausoleil
ROBERT H. BEAUSOLEIL
SENIOR EXAMINER
ART UNIT 2113